CLAIMS

1. Apparatus (2, 102) for projecting at least a first light beam (4, 104) onto a target (6, 106), which apparatus (2, 102) comprises light generating means (8, 108), which light generating means (8, 108) are connected to controlling means (10, 110) for controlling the power of the light beam (4, 104), which light generating means (8, 108) emits coherent radiation in the visible and the invisible light spectrum, **characterised** in that the apparatus (2, 102) comprises calculation means (12, 112) for calculation of the power content of the light beam (4, 104), which apparatus (2, 102) comprises means (10, 110) for reducing the light power, which means (10, 110) for reducing the light power is activated if the power content of the light beam (4, 104) increases over a defined value.

2. Apparatus according to claim 1 **characterised** in that the light generating means (8, 108) comprises a laser.

3. Apparatus according to claim 1 or 2 **characterised** in that the analysing means (12, 112) detects the power transmitted to a target (6, 106) area by internal analyses of the light beam (4, 104) during operation of the light beam (4, 104).

4. Apparatus according to any one of the claims 1-3 **characterised** in that the analysing means (12, 112) detects the power transmitted to an imaginary target area (14, 114) by internal analyses of the light beam (4, 104) during operation of the light generating means (8, 108), which imaginary target area (14, 114) is placed in a first defined distance from the apparatus (2, 102).

5. Apparatus according to any one of the claims 1-4 **characterised** in that the apparatus (2, 102) comprises a two-axis light beam deflective means (16, 18, 116, 118) for scanning a target (6, 14, 106, 114).

6. Apparatus according to any one of the claims 1-5 **characterised** in that the detection means (12, 112) detects the number of points produced by a scanning fre-

quency, where the light beam (4, 104) power is calculated for each single radiated point.

7. Apparatus according to any one of the claims 1-6 **c h a r a c t e r i s e d** in that the apparatus (2, 102) comprises a feedback circuit (20, 120), where input (22, 122) to the feedback circuit (20, 120) is connected to the detection means (12, 112), which feedback circuit (22, 122) contains an output connected to a modulation input (24, 124) at the light reduction means (10, 110) which is further connected to the light generating means (8, 108).

8. Apparatus according to any one of the claims 1-7 **c h a r a c t e r i s e d** in that the apparatus (2, 102) contains a distance measuring device (26, 126), which distance measuring device emits a second electromagnetic beam (28, 128), which distance measuring device contains at least one electromagnetic receiver (30, 130) for detecting the actual distance to an object (32, 132), which apparatus comprises means for reducing the power of the light beam (4, 104), where the power content of the light beam (4, 104) is reduced if an object (32) is detected closer to the apparatus (2) than a first defined distance.

9. Apparatus according to claim 8, **c h a r a c t e r i s e d** in that the light beam (4, 104) is deactivated if an object (32, 132) is detected closer to the apparatus (2, 102) than the first defined distance.

10. Method for operation of light generating means (8, 108), which light generating means (8, 108) are connected to controlling means (10, 110) for controlling the power of the light beam (4, 104) onto a target (6, 106), which light generating means (8, 108) emits coherent radiation which light generating means (8, 108) is operated in a public area, **c h a r a c t e r i s e d** in that the power of the light beam (4, 104) is controlled by power calculating means (12, 112) which calculating means (12, 112) is controlling the output power of the light generating means (8, 108), which light generating means (8, 108) reduces the output power level at the target to a value below a defined security level.

11. Method according to claim 10, **characterised** in that the method comprises a computer and a program, which program comprises mathematical calculations regarding a number of points in graphic settings.

12. Method according to claim 10, **characterised** in that the method comprises a computer and a program, which program comprises mathematical calculations regarding a number of points in scan rate settings.

13. Method according to claim 10, **characterised** in that the method comprises a computer and a program, which program comprises mathematical calculations regarding a number of points in size settings.

14. Method according to claim 10, **characterised** in that the method comprises a computer and a program, which program comprises mathematical calculations regarding a number of points in modulation settings.

15. Method according to claim 11- 14, **characterised** in that the computer and the program, continuously, supervise changes in settings of graphic, size, scan rate, and modulation.

16. Method according to claim 10-15, **characterised** in that the computer and the program, continuously, supervise and adjust the power level of the laser and the light beam.